

Amendments to the Claims

The following listing of the claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claims 1-13 (canceled)

Claim 14 (currently amended): A method of cyclizing a substrate capable of being cyclized by an elisabethatriene cyclase, the method comprising the step of: contacting the substrate with a purified elisabethatriene cyclase under reaction conditions that result in cyclization of the substrate, wherein the purified elisabethatriene cyclase comprises the amino acid sequences of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, and SEQ ID NO:5, and has the following characteristics: (A) an apparent molecular weight of about 47,000 Da; (B) an isoelectric point of about 5.1; and (C) the ability to cyclize geranyl geranyl diphosphate, and

wherein the substrate is selected from the group consisting of: geranyl geranyl diphosphate, a geranyl geranyl diphosphate analogue, 3-phenyl-3-desmethylgeranylgeranyl diphosphate, farnesyl diphosphate (FPP), FPP isomers, and FPP analogues, and a phosphoisoprenoid.

Claim 15 (previously presented): The method of claim 14, wherein the substrate is geranyl geranyl diphosphate (GGPP).

Claim 16 (currently amended): The method of claim 14, wherein the substrate is ~~geranyl geranyl diphosphate analogue~~ selected from the group consisting of: ~~GGPP~~ analogues, 3-PhGGPP 3-phenyl-3-desmethylgeranylgeranyl diphosphate, farnesyl diphosphate (FPP), FPP isomers, and FPP analogues.

Claim 17 (previously presented): The method of claim 14, wherein the substrate is a phosphoisoprenoid.

Claim 18 (previously presented): The method of claim 14, wherein the step of contacting the substrate with a purified elisabethatriene cyclase is performed as part of a method for producing a pseudopterosin.

Claim 19 (previously presented): The method of claim 14, wherein the step of contacting the substrate with a purified elisabethatriene cyclase results in the production of elisabethatriene.

Claim 20 (canceled).

Claim 21 (new): A method comprising the steps of:

- (a) obtaining a purified elisabethatriene cyclase;
- (b) mixing the purified elisabethatriene cyclase with a substrate capable of being cyclized by the purified elisabethatriene cyclase to create a reaction mixture; and
- (c) cyclizing the substrate by placing the reaction mixture under reaction conditions that result in cyclization of the substrate.